NextGen City Pairs - D.C.

When a traveler starts to plan a trip or when an airline operator starts to plan air service, they will look at the points of origin and destination for flights. These points of origin and destination are thought of in terms of pairs of cities or pairs of metroplexes. In measuring city-pair performance, the NPS website looks at flights that either originate or conclude at a specific metroplex, such as the New York/Philadelphia metroplex to Southern California. For each city pair, an origin airport (for example, Newark Liberty International, EWR) and a destination airport (for example, Los Angeles International, LAX) are listed. The city pairs are unidirectional (only measuring EWR to LAX in the example above) and the NPS website reports them as recommended by the NextGen Advisory Committee (NAC).

All results are reported by Fiscal Year (FY), October 1 — September 30.

Flights can depart outside of the reportable hours, but must arrive during the reportable hours at the destination airport. For a list of the reportable hours for each airport, please see the Reference Guide.

Average Airborne Time (FY)

This metric is measured as Minutes

During reportable hours at the destination airport, the average Airborne Time for flights between the selected city pair. The reportable hours vary by airport and the results are reported by fiscal year. Additional reportable hour information can be found in the airport information section of the Reference Guide.

| Origin | Destination | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------|-------------|-------|-------|-------|-------|-------|-------|
| BOS | BWI | 67.0 | 65.1 | 66.4 | 66.7 | 66.4 | 66.8 |
| BOS | DCA | 73.1 | 71.7 | 71.2 | 70.9 | 71.1 | 71.6 |
| BOS | IAD | 73.8 | 72.5 | 74.4 | 74.0 | 73.8 | 74.3 |
| BWI | CLT | 62.7 | 61.9 | 61.8 | 60.5 | 61.5 | 62.8 |
| BWI | ORD | 101.8 | 100.5 | 102.7 | 100.8 | 101.0 | 102.7 |
| CLT | DCA | 54.1 | 54.2 | 54.8 | 54.9 | 55.0 | 54.4 |
| CLT | IAD | 54.5 | 54.9 | 55.5 | 55.2 | 54.7 | 54.7 |
| DCA | EWR | 43.7 | 42.8 | 42.8 | 42.9 | 42.4 | 42.6 |
| DCA | ORD | 97.6 | 96.5 | 97.3 | 95.5 | 96.0 | 97.4 |
| IAD | JFK | 51.1 | 49.5 | 48.3 | 48.0 | 48.6 | 48.4 |
| IAD | LGA | 49.7 | 47.0 | 47.0 | 46.7 | 46.6 | 46.0 |

Effective Gate-to-Gate Time (FY)

This metric is measured as Average Minutes per Flight

During reportable hours at the destination airport, the difference between the Actual Gate-In Time at the destination airport and the Scheduled Gate-Out Time at the origin airport. Flights may depart outside reportable hours, but must arrive during them. The reportable hours vary by airport and the

results are reported by FY.

| Origin | Destination | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------|-------------|-------|-------|-------|-------|-------|-------|
| BOS | BWI | 101.5 | 95.1 | 100.6 | 95.4 | 99.7 | 99.1 |
| BOS | DCA | 97.2 | 95.0 | 99.5 | 92.1 | 96.4 | 96.1 |
| BOS | IAD | 105.9 | 104.3 | 109.4 | 105.8 | 106.8 | 105.1 |
| BWI | CLT | 91.5 | 89.8 | 91.8 | 85.6 | 89.0 | 94.2 |
| BWI | ORD | 131.6 | 131.0 | 136.8 | 131.3 | 139.3 | 145.0 |
| CLT | DCA | 81.3 | 82.1 | 87.1 | 80.4 | 83.0 | 83.5 |
| CLT | IAD | 92.2 | 90.5 | 90.5 | 84.4 | 88.6 | 93.1 |
| DCA | EWR | 92.5 | 78.2 | 89.0 | 97.9 | 97.3 | 88.3 |
| DCA | ORD | 127.6 | 127.3 | 130.5 | 129.3 | 134.1 | 139.5 |
| IAD | JFK | 101.9 | 95.2 | 95.3 | 88.1 | 97.3 | 97.7 |
| IAD | LGA | 98.6 | 89.7 | 94.7 | 89.7 | 100.1 | 102.4 |

Airborne Distance (FY)

This metric is measured as Nautical Miles

During reportable hours at the destination airport, the average airborne distance of flights between the selected city pair. The reportable hours vary by airport and the results are reported by fiscal year. Additional reportable hour information can be found in the airport information section of the Reference Guide.

| Origin | Destination | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------|-------------|------|------|-------|-------|-------|-------|
| BOS | BWI | 1 | 1 | 364.4 | 365.9 | 363.9 | 360.1 |
| BOS | DCA | 1 | 1 | 396.5 | 398.7 | 396.4 | 393.3 |
| BOS | IAD | 1 | 1 | 414.9 | 415.2 | 412.7 | 409.0 |
| BWI | CLT | 1 | 1 | 343.5 | 341.3 | 343.4 | 344.9 |
| BWI | ORD | 1 | 1 | 589.0 | 586.5 | 586.7 | 586.6 |
| CLT | DCA | 1 | 1 | 329.4 | 330.7 | 330.6 | 328.6 |
| CLT | IAD | 1 | 1 | 326.4 | 325.4 | 323.3 | 322.5 |
| DCA | EWR | 1 | 1 | 211.0 | 211.5 | 208.6 | 211.1 |
| DCA | ORD | 1 | 1 | 572.6 | 569.6 | 570.2 | 568.9 |
| IAD | JFK | 1 | 1 | 258.8 | 258.4 | 259.2 | 260.0 |
| IAD | LGA | 1 | 1 | 247.3 | 246.6 | 245.9 | 245.7 |

Efficiency:

As described by ICAO, efficiency addresses the operational and economic cost-effectiveness of gate-to-gate flight operations from a single-flight perspective. In all phases of flight, airspace users want to depart and arrive at the times they select and fly the trajectory they determine to be optimum.

Airborne Time Predictability (FY)

This metric is measured as Minutes

During reportable hours at the destination airport, the difference between the 85th and 15th percentiles of Airborne Time for flights between the selected city pair. The reportable hours vary by airport and the results are reported by FY. Additional reportable hour information can be found in the airport information section of the Reference Guide.

| Origin | Destination | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------|-------------|------|------|------|------|------|------|
| BOS | BWI | 12 | 10 | 11 | 12 | 12 | 12 |
| BOS | DCA | 16 | 15 | 14 | 12 | 14 | 15 |
| BOS | IAD | 12 | 11 | 13 | 12 | 12 | 13 |
| BWI | CLT | 14 | 15 | 14 | 13 | 13 | 13 |
| BWI | ORD | 15 | 15 | 17 | 16 | 16 | 18 |
| CLT | DCA | 10 | 9 | 9 | 10 | 10 | 10 |
| CLT | IAD | 8 | 8 | 9 | 8 | 9 | 9 |
| DCA | EWR | 12 | 10 | 10 | 10 | 10 | 10 |
| DCA | ORD | 15 | 15 | 15 | 15 | 14 | 15 |
| IAD | JFK | 13 | 10 | 10 | 9 | 9 | 9 |
| IAD | LGA | 13 | 10 | 10 | 9 | 9 | 9 |

Effective Gate-to-Gate Time Predictability (FY)

This metric is measured as Minutes

During reportable hours, the difference between the 85th and 15th percentiles of the Effective Gate-to-Gate Time metric. The reportable hours vary by airport and the results are reported by FY. Additional percentile and reportable hour information can be found in the Reference Guide.

| Origin | Destination | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------|-------------|------|------|------|------|------|------|
| BOS | BWI | 43 | 35 | 40 | 30 | 38 | 38 |
| BOS | DCA | 36 | 33 | 39 | 27 | 33 | 31 |
| BOS | IAD | 40 | 37 | 46 | 35 | 39 | 36 |

| BWI | CLT | 36 | 36 | 36 | 31 | 32 | 35 |
|-----|-----|----|----|----|----|----|----|
| BWI | ORD | 39 | 44 | 47 | 39 | 55 | 59 |
| CLT | DCA | 31 | 29 | 41 | 28 | 31 | 34 |
| CLT | IAD | 42 | 39 | 37 | 29 | 37 | 44 |
| DCA | EWR | 74 | 50 | 74 | 87 | 91 | 67 |
| DCA | ORD | 40 | 41 | 45 | 40 | 48 | 49 |
| IAD | JFK | 82 | 61 | 63 | 54 | 74 | 75 |
| IAD | LGA | 78 | 56 | 64 | 56 | 80 | 76 |

Predictability:

As described by ICAO: Predictability refers to the ability of airspace users and ATM service providers to provide consistent and dependable levels of performance.

Core Airports within D.C. Metroplex

BWI

Baltimore/Washington International Thurgood Marshall Airport

DCA

Ronald Reagan Washington National Airport

IAD

Washington Dulles International Airport